US006907578B2

(12) **United States Patent**
Wilson et al.

(10) **Patent No.: US 6,907,578 B2**
(45) **Date of Patent: Jun. 14, 2005**

(54) **USER INTERFACE FOR RECEIVING INFORMATION VIA A TRANSMISSION MEDIUM**

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(73) Assignee: **Ignite Technologies, Inc.**, Dallas, TX (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 853 days.

(21) Appl. No.: **09/745,937**

(22) Filed: **Dec. 21, 2000**

(65) **Prior Publication Data**

US 2002/0083138 A1 Jun. 27, 2002

(51) **Int. Cl.**[7] **G09G 5/00**
(52) **U.S. Cl.** **715/837**; 715/808; 715/809
(58) **Field of Search** 345/835, 837; 715/835, 837, 808, 809, 810

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(57) **ABSTRACT**

Disclosed herein is a computer-implemented method for interfacing with a resident application of a computer system. Upon receipt of a data file in a background space of the computer system, a user interface having plural command interfaces is generated. By selecting a first one of the plural command interfaces, an instruction is issued to the resident application. If a first one of the command interfaces is selected, the data file is transferred to a foreground space of the computer system and opened. Conversely, by selecting a second one of the plural command interfaces, the data file is deleted without opening or transfer to the foreground space.

12 Claims, 7 Drawing Sheets

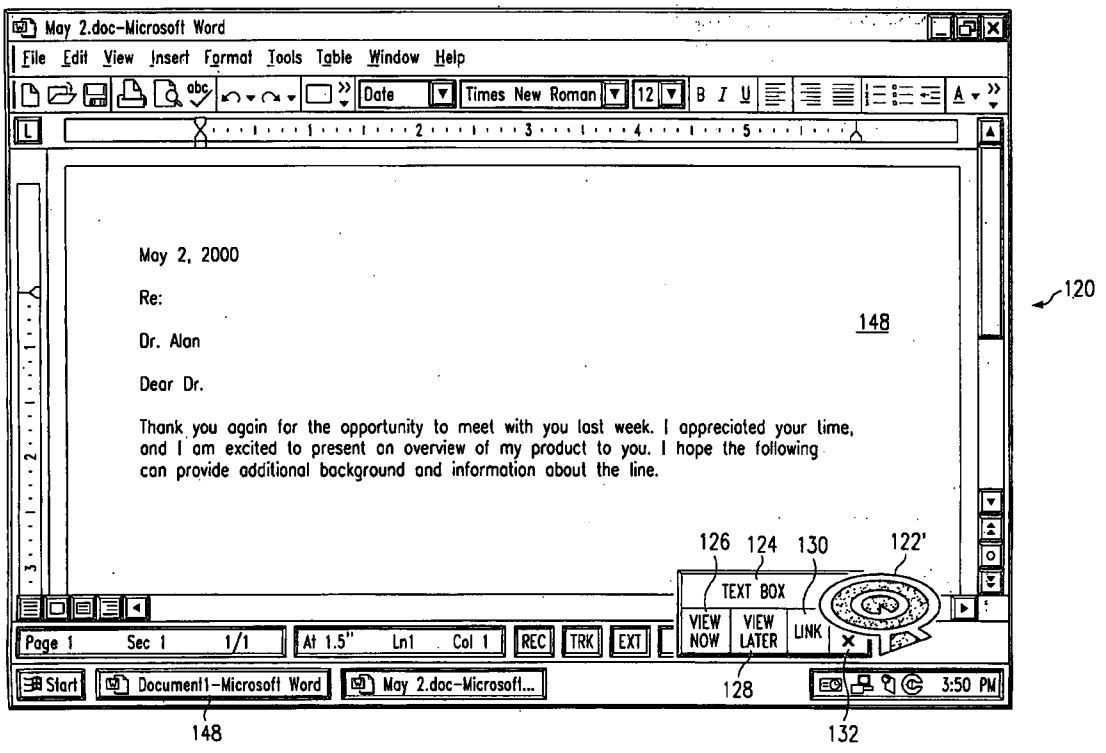


Fig. 1

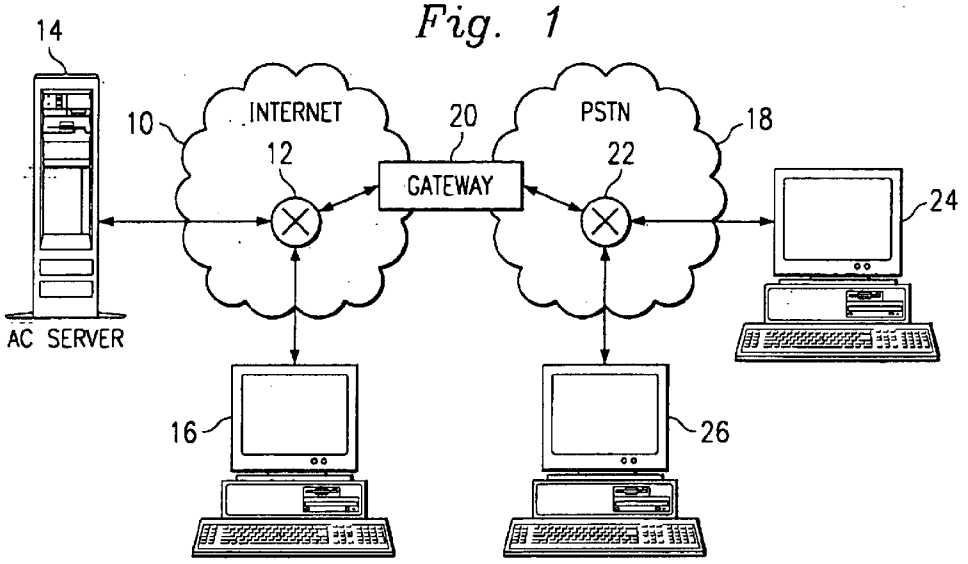
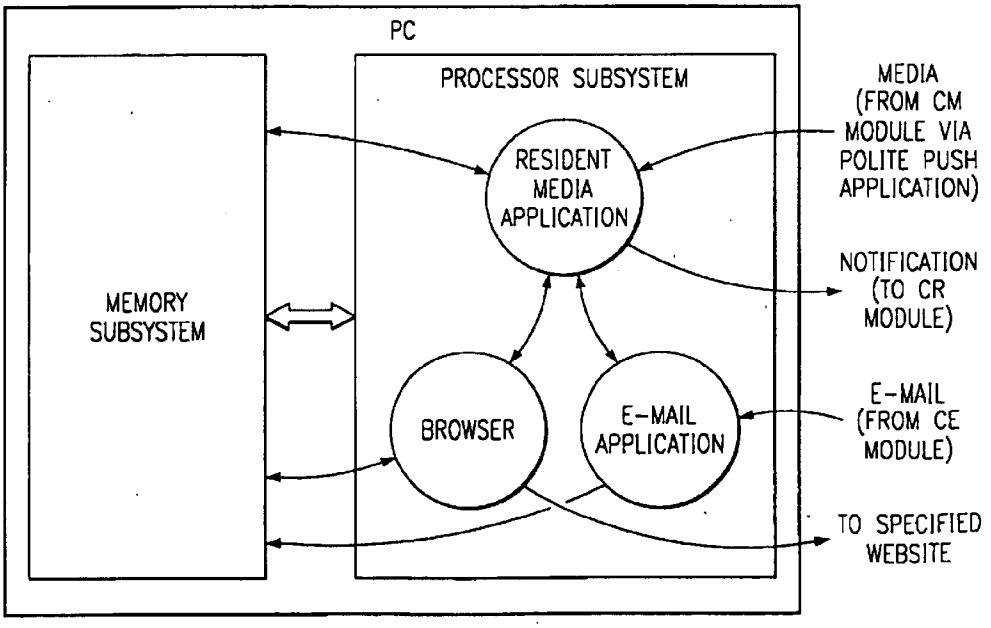

14
10
INTERNET
12
20
GATEWAY
PSTN
22
18
24
AC SERVER
16
26

Fig. 2b


PC
PROCESSOR SUBSYSTEM
MEMORY SUBSYSTEM
RESIDENT MEDIA APPLICATION
BROWSER
E-MAIL APPLICATION
MEDIA (FROM CM MODULE VIA POLITE PUSH APPLICATION)
NOTIFICATION (TO CR MODULE)
E-MAIL (FROM CE MODULE)
TO SPECIFIED WEBSITE

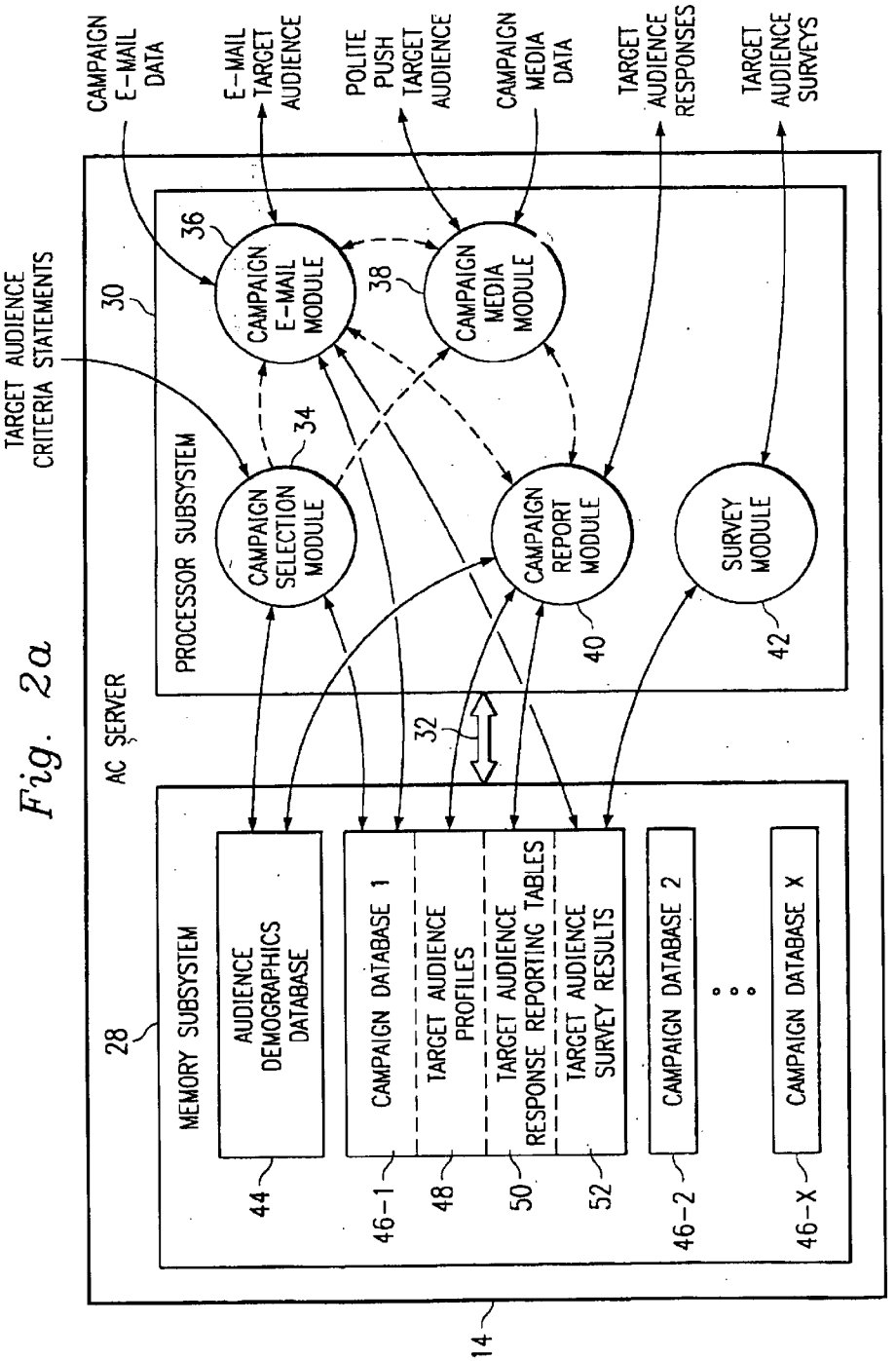

CAMPAIGN E-MAIL DATA
E-MAIL TARGET AUDIENCE
POLITE PUSH TARGET AUDIENCE
CAMPAIGN MEDIA DATA
TARGET AUDIENCE RESPONSES
TARGET AUDIENCE SURVEYS
TARGET AUDIENCE CRITERIA STATEMENTS
AC SERVER
14
PROCESSOR SUBSYSTEM
30
CAMPAIGN E-MAIL MODULE
36
CAMPAIGN MEDIA MODULE
38
CAMPAIGN SELECTION MODULE
34
CAMPAIGN REPORT MODULE
40
SURVEY MODULE
42
32
MEMORY SUBSYSTEM
28
AUDIENCE DEMOGRAPHICS DATABASE
44
CAMPAIGN DATABASE 1
46-1
TARGET AUDIENCE PROFILES
48
TARGET AUDIENCE RESPONSE REPORTING TABLES
50
TARGET AUDIENCE SURVEY RESULTS
52
CAMPAIGN DATABASE 2
46-2
CAMPAIGN DATABASE X
46-X

Fig. 2a

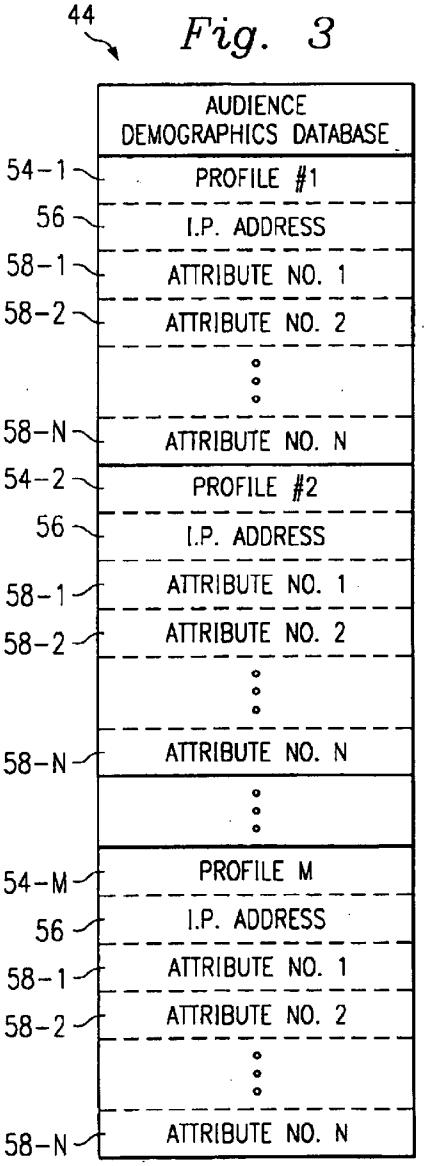


Fig. 3

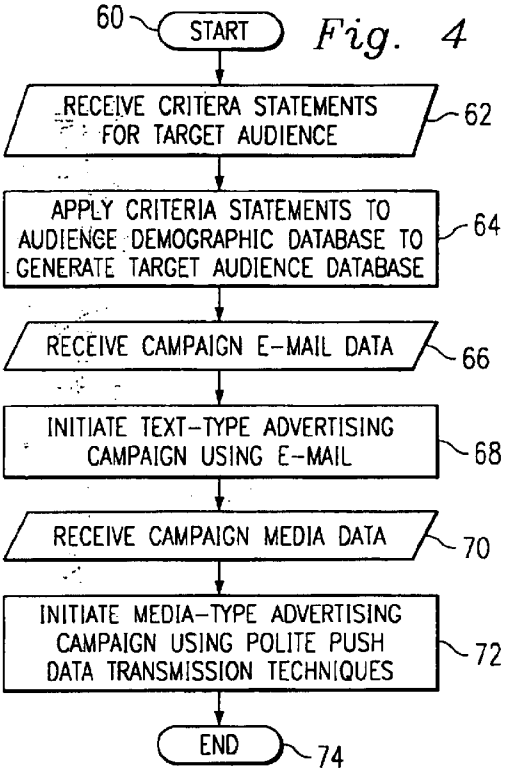


Fig. 4

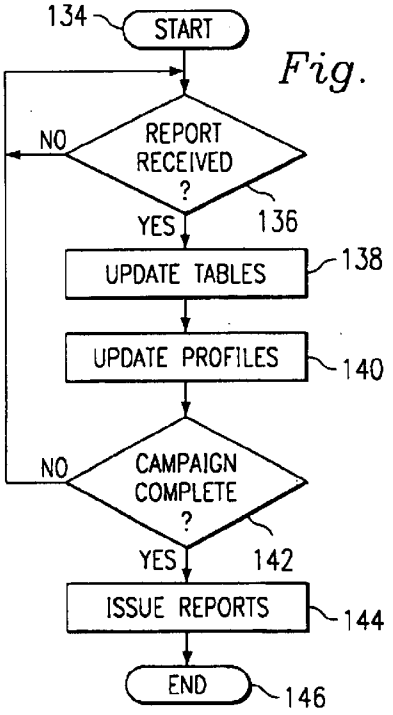


Fig. 9

Fig. 5

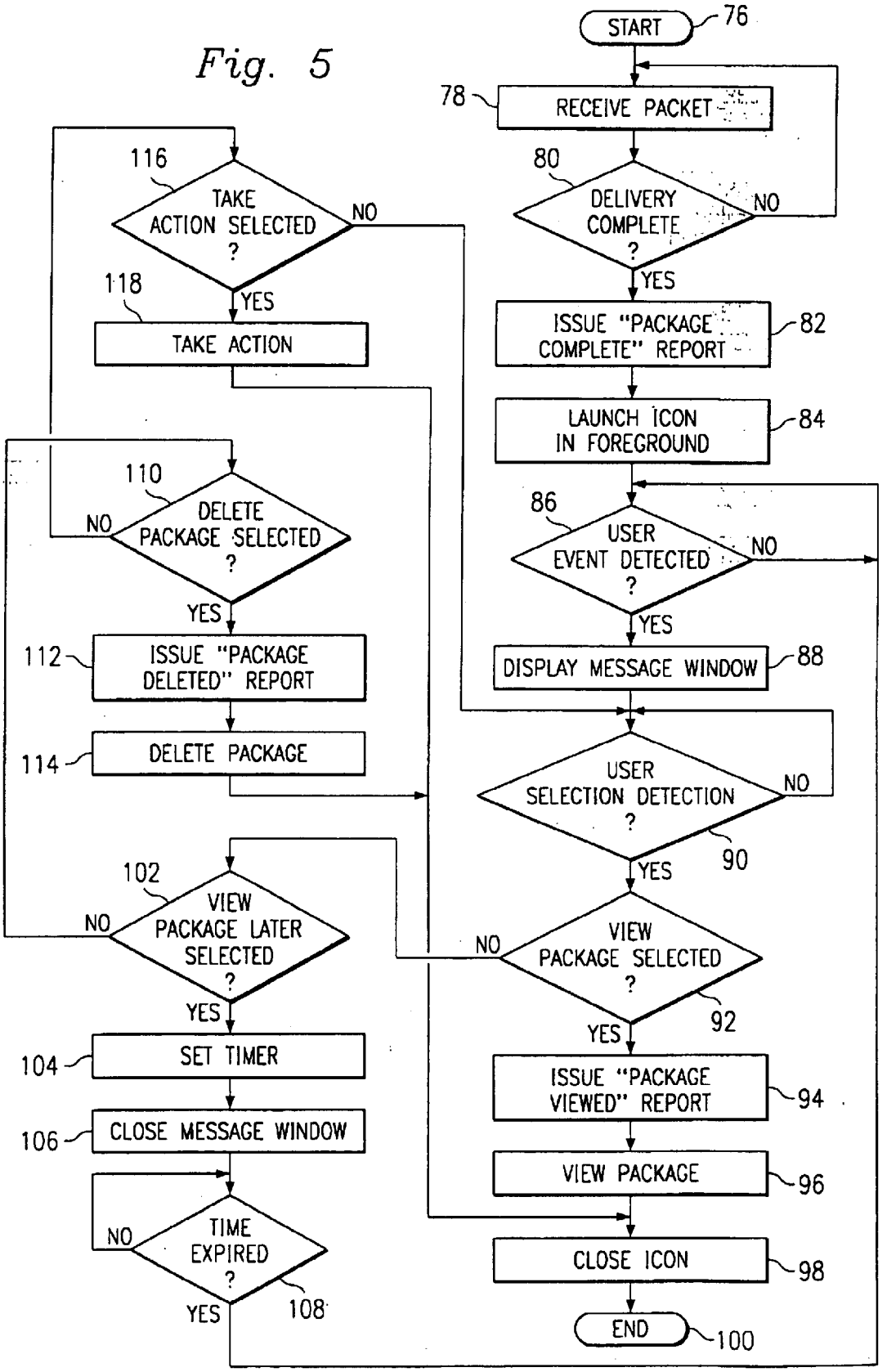

START
76
78
RECEIVE PACKET
80
DELIVERY COMPLETE ?
NO
YES
ISSUE "PACKAGE COMPLETE" REPORT
82
LAUNCH ICON IN FOREGROUND
84
86
USER EVENT DETECTED ?
NO
YES
DISPLAY MESSAGE WINDOW
88
USER SELECTION DETECTION ?
NO
90
YES
VIEW PACKAGE SELECTED ?
NO
92
YES
ISSUE "PACKAGE VIEWED" REPORT
94
VIEW PACKAGE
96
CLOSE ICON
98
END
100
116
TAKE ACTION SELECTED ?
NO
118
YES
TAKE ACTION
110
DELETE PACKAGE SELECTED ?
NO
YES
112
ISSUE "PACKAGE DELETED" REPORT
114
DELETE PACKAGE
102
VIEW PACKAGE LATER SELECTED ?
NO
YES
104
SET TIMER
106
CLOSE MESSAGE WINDOW
TIME EXPIRED ?
NO
YES
108

Fig 6

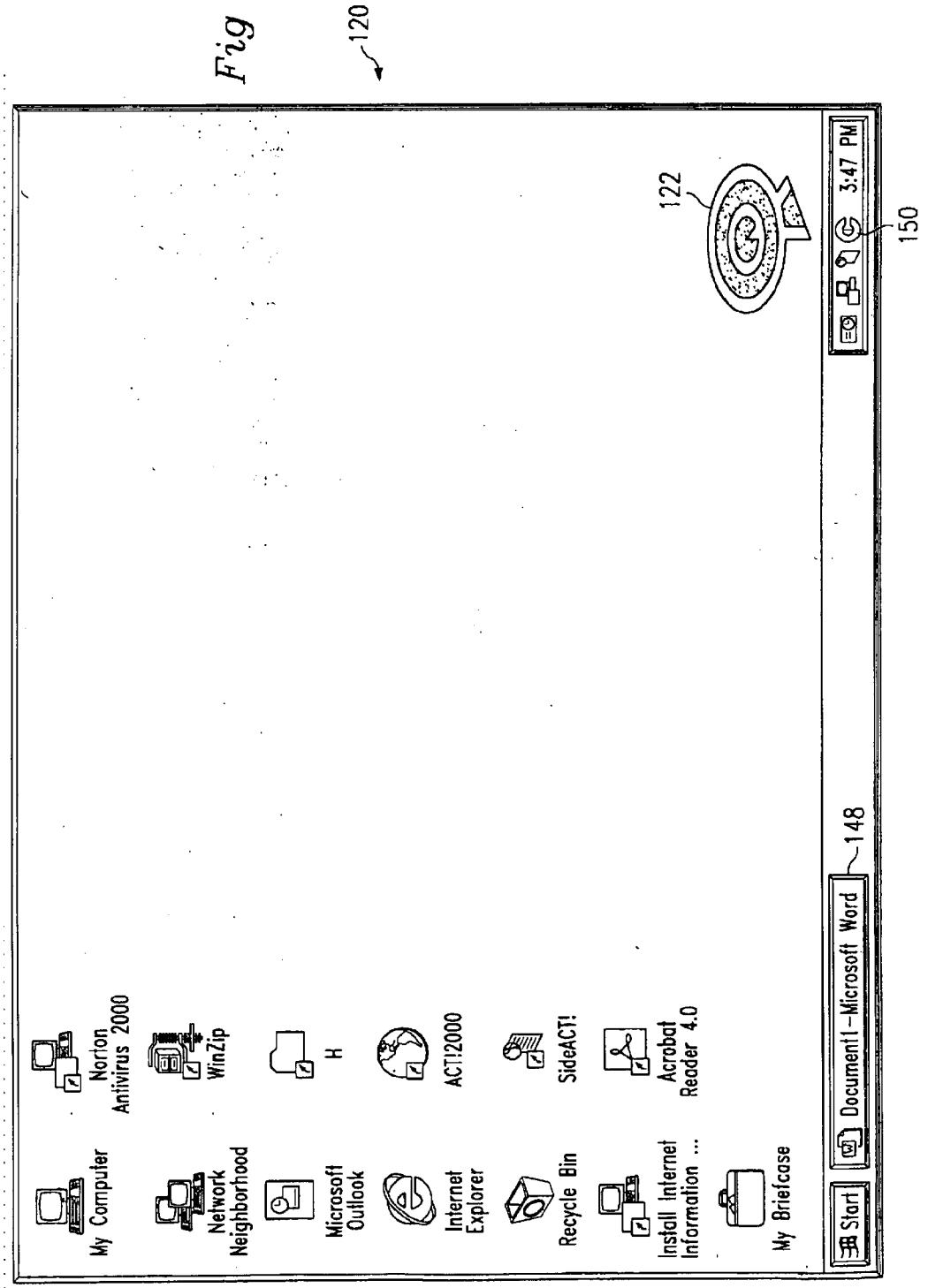

120
My Computer
Norton Antivirus 2000
Network Neighborhood
WinZip
Microsoft Outlook
H
Internet Explorer
ACT!2000
Recycle Bin
SideACT!
Install Internet Information ...
Acrobat Reader 4.0
My Briefcase
Start
Document1 - Microsoft Word
148
122
3:47 PM
150

Fig. 7

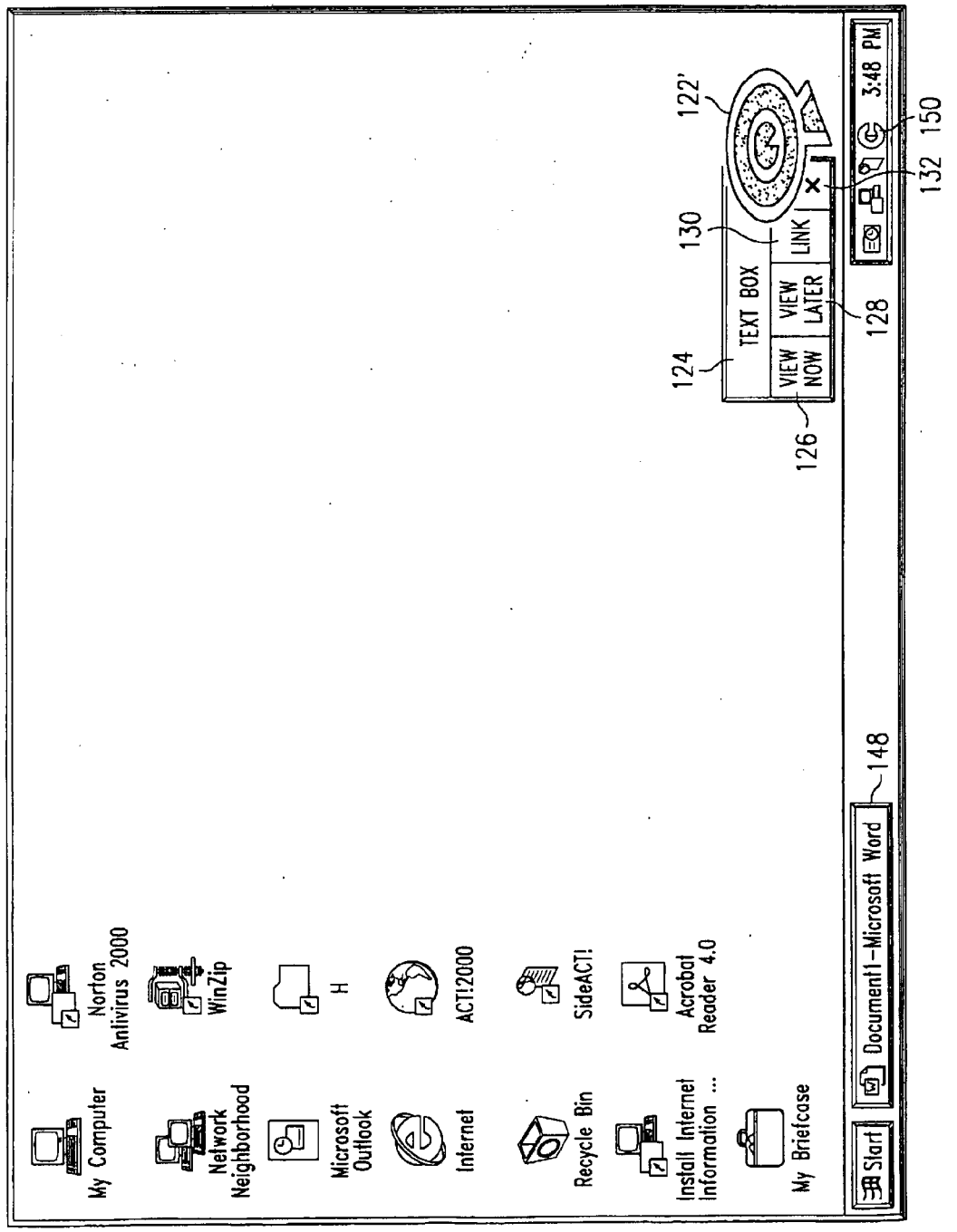
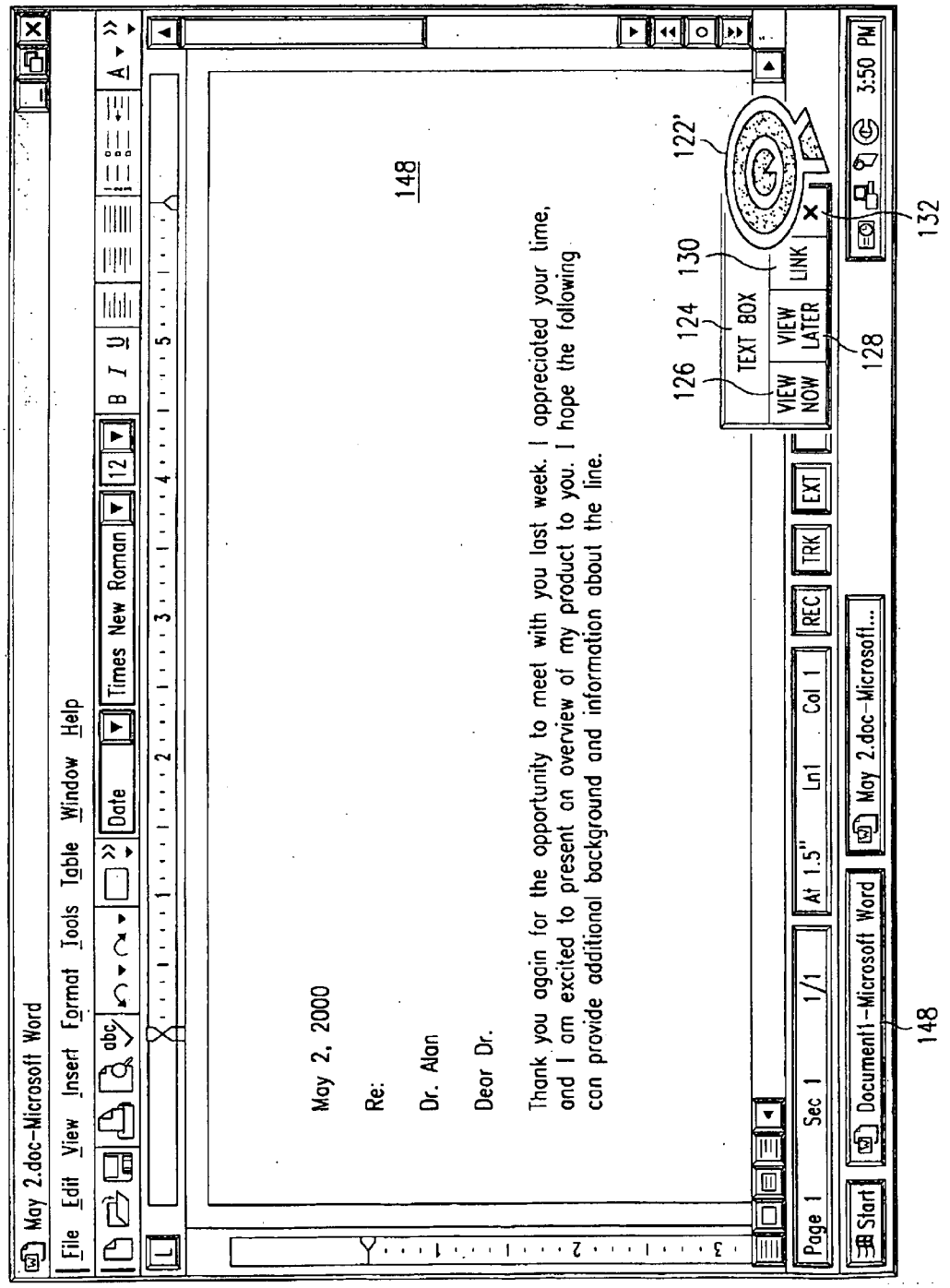

120
My Computer
Norton Antivirus 2000
Network Neighborhood
WinZip
Microsoft Outlook
H
Internet
ACT!2000
Recycle Bin
SideACT!
Install Internet Information ...
Acrobat Reader 4.0
My Briefcase
Start
Document1 - Microsoft Word
148
122'
130
124
TEXT BOX
VIEW NOW
VIEW LATER
LINK
126
128
132
150
3:48 PM

Fig. 8


120
May 2.doc-Microsoft Word
File Edit View Insert Format Tools Table Window Help
Times New Roman
12
148
May 2, 2000
Re:
Dr. Alan
Dear Dr.
Thank you again for the opportunity to meet with you last week. I appreciated your time, and I am excited to present an overview of my product to you. I hope the following can provide additional background and information about the line.
122'
130
124
126
TEXT BOX
VIEW NOW
VIEW LATER
LINK
128
132
Page 1
Sec 1
1/1
At 1.5"
Ln1
Col 1
REC
TRK
EXT
Start
Document1-Microsoft Word
May 2.doc-Microsoft...
3:50 PM
148

USER INTERFACE FOR RECEIVING INFORMATION VIA A TRANSMISSION MEDIUM

TECHNICAL FIELD

The invention relates generally to a user interface for a computer and more particularly to a user interface for controlling the handling of downloaded information such as advertisements received over an electronic transmission medium such as the Internet.

BACKGROUND

Recently, considerable attention has been focused on advertising over the Internet. While various techniques have been used to advertise goods or services over the Internet, the most popular of these is commonly referred to as "banner" advertising. In banner advertising, a portion of a web page accessed by computer users is dedicated to one or more advertisements for goods or services offered by a third party. Typically, all or part of the banner advertisement also functions as a button which, when depressed, immediately links the computer user to the advertiser's web site where additional information on the product or service is maintained.

Despite its prevalence on many web sites, banner advertising has been less than successful. One drawback is that, in contrast to other advertising mediums such as television where the audience is passively viewing programs and advertisements being broadcast, most computer users on the Internet are actively searching for content for review. As a result, by responding to a banner displayed on an opened page, the computer user must temporarily discontinue the very activity which initiated their search. Thus, unlike other advertising mediums, on the Internet, members of the target audience often resist clicking through to view the entire content of the advertisement being distributed. For example, some studies have shown that about 0.05% of computer users exposed to a banner advertisement respond to the particular ad.

Furthermore, depending on the speed at which a user clicks through a web page containing a banner during their search for content, some advertisements, particularly those that lack any eye-catching features, may barely be noticed by the members of the target audience. However, visually enhanced advertisements, for example, advertisements that incorporate full motion video or audio, which are more likely to draw a user's attention away from their original task, are often unsuitable for these uses since the download time for such advertisements would significantly slow a user's computer. As a result, the very visual enhancements which would make banner advertisements more appealing could also very easily alienate the very audience with whom an advertiser seeks to promote their goods or services.

U.S. Pat. No. 5,913,040 to Rakavy et al. is directed to a method and apparatus for transmitting and displaying information between a remote network and a local computer. Rakavy et al. discloses a data transmission technique commonly known as "polite push" in which data is transmitted from the remote network to the local computer only when utilization of the communications link between the two drops below a pre-established threshold value. By transmitting data in this manner, Rakavy et al. seeks to minimize the interference which a download of a full-motion video or other large data file from the remote network can cause with an Internet search or other use of the communications link by the local computer. Rakavy et al. further contemplates that polite push data transmission techniques may be used in an advertising application which takes user preferences into account. Specifically, Rakavy et al. discloses a database in which advertisements and user preferences are maintained and an advertisement display manager which selects and displays advertisements downloaded from the database.

While Rakavy et al. discloses the use of polite push technology for downloading advertisements to local computers and of selecting advertisements for display based upon user preferences, Rakavy et al. has failed to fully exploit either of these concepts. It is, therefore, the object of this invention to apply user preferences and polite push data transmission techniques to advertising mediums which involve the transfer and display of advertisements over a network such as the Internet.

SUMMARY

Disclosed herein is a computer-implemented method for interfacing with a resident application of a computer system. Upon receipt of a data file in a background space of the computer system, a user interface having plural command interfaces is generated. By selecting a first one of the plural command interfaces, an instruction is issued to the resident application. If a first one of the command interfaces is selected, the data file is transferred to a foreground space of the computer system and opened. Conversely, by selecting a second one of the plural command interfaces, the data file is deleted without opening or transferring to the foreground space.

In a further aspect thereof, a notification icon may be generated upon arrival of the data file and, upon selection thereof, the notification icon converts into the user interface. In still further aspects thereof, a third command interface, a fourth command interface, a text box and/or another notification icon are also generated. Upon selecting the third command interface, the opening of the data is delayed for a selected time period. Conversely, upon selecting the fourth command interface, a browser which establishes a bi-directional communication link to a specified Internet address is opened. While unopenable, the text box contains information describing the received data file. Finally, if a pair of notification icons are generated, a first notification icon is generated upon initiation of the arrival of the data file while a second notification icon is generated upon completion of the arrival of the data file. The first notification icon may have a reduced size relative to the second notification icon.

Also disclosed herein is a computer-implemented user interface for opening a media file transmitted to a background space of a computer system via a network using a polite push data transmission technique. The user interface is comprised of first and second command interfaces, the selection of a first one thereof causes the transfer of the received media file to a foreground space of the computer systems where it is opened while the selection of a second one thereof causes the media file to be deleted without opening or transfer to the foreground space. The user interface may further comprise a third command interface and/or a fourth command interface. The selection of the third command interface delays the opening of the media file for a selected time period. Selection of the fourth command interface, on the other hand, establishes a link with an address associated with an originator of the media file. As disclosed herein, the first, second, third and fourth command interfaces all form part of a first level icon of a user interface

which includes first and second level icons. By selecting the second level icon, the user drills down to the first level icon.

Further disclosed herein is a computer-implemented user interface for opening a media file, transmitted to a background space of a computer system by a remote application, using a polite push data transmission technique. The user interface comprises a first and second selectable command interface and a notification application coupled to the first and second command interfaces. By selecting the first or second command interface, an application residing on the computer system initiates a first or second operation on the media file, respectively. The notification application, on the other hand, transmits a notification to the remote application upon selection of either the first selectable command interface or the second selectable command. At the remote application, an evaluation of an advertising campaign being at least partially conducted by transmitting the media file to the computer system is constructed using the notifications issued by the notification application in response to selection of either the first or second selectable command interfaces. If the first command interface is selected, the media file is opened and a notification of the opening is issued. Similarly, if the second command interface is selected, the media file is deleted and a notification of the deletion prior to opening thereof is issued. Selection of the first command may also cause a transfer of the media file to a foreground space of the computer system before opening thereof while selection of the second command interface may cause the resident application to delete the media file without transfer thereof to the foreground space.

It is further disclosed that the user interface may also include a third and/or a fourth selectable command interface. Selection of the third command interface causes the resident application to delay, for a selected period of time, the transfer of the media file to the foreground space for opening thereof. Selection of the third command interface may also cause the notification application to issue a notification of a delay in opening the media file. Selection of the fourth command interface, on the other hand, causes the resident application to establish a bi-directional communication link with an Internet address associated with an originator of the media file. Like the notifications of openings and deletions, the notification of delays and linkings may also be used to construct the evaluation of the advertising campaign.

Finally, also disclosed is a computer-implemented user interface for opening a media file transmitted to a background space of a computer system using a polite push data transmission technique which comprises means for generating an icon in a foreground space of the computer system in response to receipt of the media file by the computer system in the background space thereof, means for generating at least one command interface in response to an operator of the computer system selecting the icon and means for initiating execution of a first operation on the media file while the media file remains in the background space of the computer system by selecting a first one of the at least one command interface. This particular user interface may also include means for issuing, in response to the selection of the first command interface, a notification to a remote application where the notifications are used to construct an evaluation of an advertising campaign being at least partially conducted by transmitting the media file to the computer system.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a block diagram of a data transmission network having, as a first node thereof, a server suitable for implementing advertising campaigns utilizing polite push data transmission techniques and for analyzing results of the advertising campaigns implemented thereby and having, as a second node thereof, a computer system suitable for receiving media delivered thereto as part of the advertising campaign implemented by the server.

FIG. **2***a* is an expanded block diagram of the server of FIG. **1**.

FIG. **2***b* is an expanded block diagram of the computer system of FIG. **1**.

FIG. **3** is a block diagram of an audience demographics database used by the server of FIG. **2***a* to construct a campaign database describing members of an audience to be targeted during an advertising campaign.

FIG. **4** is a flow chart of a method by which the server of FIG. **2***a*implements an advertising campaign utilizing polite push data transmission techniques to deliver media to members of the targeted audience.

FIG. **5** is a flow chart of a method by which each member of the targeted audience may control media delivered thereto during an advertising campaign implemented in accordance with the method of FIG. **4**.

FIG. **6** is a graphical illustration of a "pop-up" icon used to notify a member of the targeted audience of the delivery of media thereto.

FIG. **7** is a first graphical illustration of a user interface accessible through the notification icon of FIG. **6**, as it appears when accessed in the absence of an application running in a foreground space of the computer system of FIG. **2** and through which the member of the targeted audience controls the media delivered thereto.

FIG. **8** is a second graphical illustration of the user interface of FIG. **7**, as it appears when accessed while an application is running in the foreground.

FIG. **9** is a flow chart of a method of analyzing the results of an advertising campaign implemented in accordance with the method of FIG. **4**.

DETAILED DESCRIPTION

Turning now to the drawings, in FIG. **1**, the reference numeral **10** designates a large composite computer network. While, in the embodiment disclosed herein, the computer network **10** is the Internet, it is fully contemplated that a wide variety of other types of local or wide area networks ("LANS" or "WANS") are suitable for the uses contemplated herein. It should be readily appreciated that the Internet **10** is comprised of a plurality of nodes, at each of which one or more of a wide variety of devices reside. However, for ease of illustration, only one such node, specifically, node **12**, is shown in FIG. **1**. Of course, it should be clearly understood that the foregoing description of the Internet **10** and the various devices which reside at nodes thereof has been greatly simplified and that numerous technical details not necessary for an understanding of the invention have been omitted. It should be further understood that, strictly speaking, advertising campaign ("AC") server **14** and personal computer ("PC") **16** are Internet nodes but are shown in FIG. **1** as being outside the Internet **10** since the AC server **14** and the PC **16** variously operate as the point of origination and/or point of destination in data exchanges.

Node **12** is a router which, as will be more fully described below, routes data between locations, typically, between nodes, within the Internet **10**. Both the AC server **14** and the PC **16** are shown as having a direct connection to the router **12** of the Internet **10**. Of course, the manner in which the AC

server **14** and the PC **16** are connected to the Internet **10**, as well as whether one or both of the AC server **14** and the PC **16** have permanent or temporary connections to the Internet **10** would depend on a number of factors, including the respective computing power of the AC server **14** and the PC **16** and the respective financial resources of the operator of the AC server **14** and the PC **16**. The AC server **14** is a larger scale computer with sufficient processing and memory capacity to host a web site, maintain various databases and perform the processing, data transfer and Email messaging functions described herein. The PC **16** is a standard mini-tower, desktop, laptop or similarly sized computer having, as minimum system requirements, the Windows 95, 98, NT or 2000 operating system, all of which are commercially available through Microsoft Corporation of Redmond, Wash., a Pentium microprocessor manufactured by Intel Corporation of Santa Clara, Calif. (or, alternately, any non-Intel microprocessors having similar operating speeds), 64 megabytes ("MB") of random access memory ("RAM"), 20 MB of available space on the auxiliary memory, an Internet connection, either direct or dialup, and a web browser such as Netscape Navigator 4.0 (or higher) manufactured by Netscape Communications Corporation of Mountain View, Calif. or Microsoft Explorer 4.0 (or higher) manufactured by Microsoft Corporation of Redmond, Wash. Of course, the PC **16** is shown in FIG. **1** as being directly coupled to the node **12** merely for ease of illustration. In most configurations, the physical connection between the PC **16** and the node **12** would be through one or more intermediate devices such as a larger scale computing device such as those operated by an Internet service provider ("ISP").

Gateway **20** interconnects the Internet **10** with public switched telephone network ("PSTN") **18**. Like the Internet **10**, FIG. **1** also illustrates the PSTN **18** in a highly simplified form in which only one device, here, switch **22**, of a multitude of devices which collectively form the PSTN **18** is shown. Coupled to the switch **22** are PCS **24** and **26**, both of which should have minimum system requirements similar to that of the PC **16**. Of course, the PCS **24** and **26** are shown in FIG. **1** as being directly coupled to the switch **22**. In actuality, however, the PCS **24** and **26** are coupled to the switch **22** through one or more devices, including a regional Bell operating company (or "RBOC"). As will be more fully described below, and in a manner similar to that of the PC **16**, the PCS **24** and **26** variously operate as the point of origination or point of destination for data exchanges with the AC server **14**.

It should be clearly understood that the present disclosure of three PCS, specifically, the PCS **16**, **22** and **24**, as members of a target audience of an advertising campaign initiated by the AC server **14** is purely by way of illustration and that a typical advertising campaign would be directed to a target audience comprised of thousands of members in addition to the three members of the target audience specifically illustrated herein. Further, while all of the illustrated members of the target audience are PCS, it is fully contemplated that other types of computer systems, as well as other intelligent devices, for example, PDAs, capable of receiving and displaying data received from a computer network and having an interface from which a user may transmit data and/or commands to a device residing on the computer network, may also be designated as members of a target audience of an advertising campaign. Finally, while the present disclosure further provides that all of the computer-implemented initiations and analysis of advertising campaigns are executed by software residing in the AC server **14**, it is fully contemplated that one or more databases accessed or processes executed thereby may be off-loaded from the AC server **14**.

Referring next to FIG. **2***a*, the AC server **14** will now be described in greater detail. As may now be seen, the AC server **14** is a computer system having at least one port (not shown) for coupling to the router **12** or other devices of the Internet **10** via a transmission medium (not shown) such as a twisted pair of conductors. The AC server **14** includes a processor subsystem **28** sized to execute plural applications of the types described herein, including, but not limited to, applications for assembling a target audience for an advertising campaign, initiating one or more passive push-type advertising campaigns, initiating one or more E-mail-type advertising campaigns, providing interaction between associated passive push-type and E-mail-type advertising campaigns, processing requests for additional information received from members of the target audience, processing information received from members of the target audience, analyzing responses received from the target audience, evaluating the results of the advertising campaign, updating contents of one or more databases based upon the results of the advertising campaign and generating reports on the results of the advertising campaign.

A memory subsystem **28** is coupled to the processor subsystem **30** by a bidirectional address, data and control bus **32**. Of course, various components and/or devices which typically form part of a computer system such as the AC server **14** have been omitted from FIG. **3** for ease of illustration. Further, those components of the AC server **14** which are illustrated in FIG. **2***a* have been greatly simplified for ease of description. Thus, by the term "processor subsystem", it is intended to refer to the collective processing capability within the AC server **14**. As such, it is fully contemplated that the processor subsystem **30** encompasses plural processing devices and/or circuits variously located within the AC server **14**. Similarly, by the term "memory subsystem", it is intended to refer to the total available memory space within the AC server **14**. As such, it is fully contemplated that the memory subsystem **28** encompasses all of the main, auxiliary, as well as any cache memories, within the AC server **14**. Typically, information frequently needed by the processor subsystem **30** is stored in a main memory of the memory subsystem **28** while information less frequently needed by the AC server **30** is stored in an auxiliary memory of the memory subsystem **28**. Finally, for most computer systems, the main memory resides on a local bus while the auxiliary memory resides on the system bus, typically either an industry standard architecture (or "ISA") bus, an extended ISA (or "EISA") bus or a peripheral connection interface (or "PCI") bus. Accordingly, it should be readily apparent that the address, data and control bus **32** encompasses the various local and system buses within the AC server **14**.

Residing on the processor subsystem **30** are plural software applications, hereafter referred to as "software modules". As illustrated herein, the software modules include a campaign selection ("CS") module **34**, a campaign Email ("CE") module **36**, a campaign media ("CM") module **38**, a campaign report ("CR") module **40** and a survey ("S") module **42**. It should be noted that, while FIG. **2***a* is illustrated such that it appears that the CS module **34**, the CE module **36**, the CM module **38**, the CR module **40** and the S module **42** are all discrete components of the processor subsystem **30**, like the vast majority of software currently in use, the various software modules **34–42** are all maintained in the memory subsystem **28**, typically, in the auxiliary memory thereof, until executed by the main processor unit,

typically, a microprocessor, of the processor subsystem **30**. It should be further understood that, while FIG. **2***a* is illustrated such that it further appears that the various software modules **34–42** are each discrete software modules of the processor subsystem **30**, by no means should FIG. **2***a* be interpreted as requiring that each of the various software modules **34–42** be discrete applications. Typically, a software module such as any one of the CS, CE, CM, DR and S modules **34**, **36**, **38**, **40** and **42** is comprised of a sequence of plural lines of code arranged in the order of execution. Accordingly, it is contemplated that, rather than constructing each of the CS, CE, CM, DR and S modules **34**, **36**, **38**, **40** and **42** as separate applications, each of the software modules **34–42** may instead merely be a sub-routine of a single application that incorporates the functionality of each of the illustrated modules. Furthermore, while each of the SC, CE, CM, CR and S modules **34**, **36**, **38**, **40** and **42** are illustrated as residing within the processor subsystem **30**, such illustration should not be interpreted as requiring that all of the software modules **34–42** are executed by a common component, typically, the microprocessor, of the processor subsystem **30**. Rather, it is fully contemplated that the execution of one or more of the software modules **34–42** may be off-loaded to another component or device. For example, depending on the size and design of an advertising campaign, the respective processing demands of the CE and CM modules **36** may be too great for both modules to be executed simultaneously by the microprocessor. Accordingly, it may be considered advantageous to off-load at least one software module, for example, the CM module **38** onto a discrete processing device or even a discrete board (not shown), for example, a daughter board, coupled to the processor subsystem **30** by the address, data and control bus **32**.

As will be more fully described below in connection with FIGS. **2***b*, **3–9**, each of the software modules **34–42** provide certain functionality useful in conducting an advertising campaign using the Internet as the broadcast medium for the campaign. The CS module **34** constructs a specific database which describes a target audience for an advertising campaign from a larger audience demographics database and a set of criteria for the target audience. The CE module **36** initiates a first portion of an advertising campaign to be directed towards a first selected portion of the target audience to be contacted. To initiate the Email portion of the campaign, the CE module **36** accesses campaign Email data and the campaign database constructed by the CS module **34** and initiates the transmission of Email messages contained in the Email data to the first portion of the targets identified in the campaign database. Similarly, the CM module **38** initiates a second portion of an advertising campaign to be directed towards a second selected portion of the target audience to be contacted. To initiate the second portion of the advertising campaign, the CM module **34** accesses the campaign database constructed by the CS module **34** and campaign media data. The CM module **38** then initiates a polite push-style advertising campaign to be described in much greater length below to distribute the campaign media to the second portion of the targets identified in the campaign database. As Emails are not particularly size-intensive, the campaign Email data transmitted to each target identified in the first portion of the campaign database, it is contemplated that the campaign media data would typically include full-motion video or other types of space-intensive multimedia presentations. As it is contemplated that sizable amounts of campaign media data shall be transmitted to each target identified in the second portion of the campaign database, a polite push data transmission technique which delivers information files in the background is recommended. Of course, the use of a polite push data transmission is purely exemplary and it is specifically contemplated that other data transmission techniques, particularly those which minimize any effects on the PC while the PC receives the data transmission, may be used in conjunction with the present invention.

As disclosed herein, both the CE module **36** and the CM module **38** obtain the target audience from the campaign database, for example, by polling the campaign database upon initiating an advertising campaign. In an alternate configuration shown in phantom in FIG. **2***a*, the CS module **34** transmits the first and second portions of the campaign database to the CE and CM modules **36** and **38**, respectively, upon construction thereof. However, such a configuration would typically be less preferred because it is often desirable for the constructed campaign database to be reviewed, for example, for clearly erroneous databases which may possibly be inadvertently constructed if the target audience criteria has one or more logical errors in the target audience criteria used to construct the campaign database.

The CR module **40** receives all responses generated by the various members of the target audience upon receiving a data transmission forming part of the advertising campaign. As is more fully described below, for the Email advertising campaign initiated by the CE module **36**, the expected responses to the Email advertising campaign would be one of the following: "Email returned", "Email received by target, no follow-up requested" and "Email received by target, follow-up requested." Of course, use of a more sophisticated Email system could increase the number of different responses which may be received to include responses such as "Email received and deleted without opening", "Email received, opened and deleted" and "Email received and opened" as well as other possible responses. For the media advertising campaign, the possible responses from members of the target audience receiving the advertisement include the following: "package received", "package viewed", "package deleted" and "action taken." As before, the possible responses by the recipient of the target audience set forth herein are purely exemplary and it is fully contemplated that the CM module **38** may be constructed such that a wide variety of other responses to the media campaign are possible.

Upon receipt of responses from members of the target audience, the CR module may take any one of a number of actions. The primary action taken by the CR module is to log the responses by writing the received responses to the target audience response reporting table. As disclosed herein, the received responses are entered into the target audience reporting tables based upon time of receipt for the response. The CM module **40** also compiles the received responses into a report. For example, the reports generated may include counts of the number of responses received, average time elapsed between time of delivery and time of response. Again, it should be noted that the disclosed reports are purely exemplary and that any type of report may be generated using the responses received by the CR module **40**. It is further contemplated that the CR module **40** may use various techniques to generate reports. For example, preselected report formats such as "Total number of Responses" may be placed in the target audience response reporting tables and, each time the CR module receives a response, the CR module **40** may simply increment the count of total number of responses being maintained within the target audience reporting table. Alternately, the CR module **40** may

process the received data into a reportable format and then write the processed data to the target audience response reporting tables. For example, if the pre-selected report format maintained in the target audience reporting tables was "Percentage of target audience responding", upon receiving a response, the CR module **40** would retrieve the total number of responses from the target audience response reporting tables, increment the response by one, retrieve the total number of target members in the audience, determine the percentage of target members who have responded and write the determined percentage back to the target audience response reporting tables.

In addition to generating reports for use in analyzing the effectiveness of the conducted advertising campaign, the responses received by the CR module **40** are also used to update the audience demographics database and/or the campaign database. For example, if a media transmission is returned before delivery, the IP address from the demographics database may be outdated. As a result, the IP address corresponding to the returned electronic transmission should be deleted from both the audience demographics database and the campaign database.

The S module **42** is an interactive software module, which, while illustrated as forming part of the processor subsystem **30**, may readily be located elsewhere. Generally, the campaign media data transmitted to each member of the target audience gives that member the opportunity to request a survey. If the member of the target audience agrees to take a survey, the survey module **42** generates plural questions, each of which is answered by the member of the target audience. The responses are compiled by the survey module **42** and transmitted to the target audience survey results portion of the memory subsystem **28**.

Continuing to refer to FIG. **2***a*, the memory subsystem **28** will now be described in greater detail. As may now be seen, residing within the memory subsystem **28** are an audience demographics database **44** and plural advertising campaign databases **46-1** through **46**-X. The audience demographics database **44** is comprised of plural entries, each containing information describing a person or other entity who may be selected as a member of a target audience for an advertising campaign. The memory subsystem further includes memory spaces or databases for target audience profiles **48**, target audience response reporting tables **50**, and target audience survey results **52**. As will be more fully described below, the CS module **34** constructs a campaign database which identifies each member of the target audience for an advertising campaign by selecting plural entries from the audience demographics database **44** and then assembling the selected entries (or portions thereof) into a campaign database.

Referring to FIG. **2***b*, another block diagram is shown for illustrating other module contained in the processor subsystem **30**. In addition to the modules described with regard to FIG. **2***a*, the processor subsystem **30** also has a resident media application module **47** that interacts with various other modules or subsystems. For example, it receives media inputs from the campaign media (CM) module **38** via the polite push application. It further sends notifications to the campaign report (CR) module **40**. Further, it interacts or communicates with other modules such as a browser module **48** and an email application module **49**. The resident media application module **47**, the browser module **48** and the email application module **49** all have access to the memory subsystem **28**, and connects to other related modules such as the campaign email module **36**.

Referring momentarily to FIG. **3**, the audience demographics database **44** from which a campaign database may be assembled will now be described in greater detail. As shown, the audience demographics database mainly contains a series of audience profiles **54-1** to **54**-M. Each profile has various predetermined attributes, the number of the attributes being expandable. Taking Profile #1 **(54-10)** for example, there is an I.D. Address attribute storing the identity and the address of a particular member of the audience. Attributes **58-1** to **58**-N in Profile #1 can be used to store various types of information relating to the same member of the audience. It is obvious that if more attributes are included, more information is at hand to understand the member.

Referring now to FIG. **4**, a flow diagram is shown illustrating a high level process for generating an advertising campaign utilizing polite push data transmission techniques to deliver media to members of a targeted audience. After the process is initiated in step **60**, criteria statements for a target audience is received in step **62**. Information derived from the criteria statements are applied to the audience demographic database in order to generate a target audience database. The members in the target audience database meet the predetermined requirements of the criteria statements. In step **66**, campaign email data is further received, and then a text-type advertising campaign is initiated using email in step **68**. After receiving campaign media data in step **70**, a media-type advertising campaign using the polite push data transmission techniques are initiated in step **72**.

Referring to FIG. **5**, it illustrates a flow chart of a method by which each member of the targeted audience may control media delivered thereto during an advertising campaign implemented in accordance with the method described in FIG. **4**. For illustration purposes, it is assumed that a PC is used by a member of a targeted audience for receiving media data of the advertising campaign. It is understood that various receiving devices can also be used. Once a process starts in step **76**, the PC will receive the delivered media data in the form of packets in step **78**. An application resident to the PC running in the background first checks continuously to see whether the delivery is complete in step **80**. If so, a "package complete" report is issued in step **82**, and a predetermined icon is then launched in the foreground on a display of the PC so that the member's attention can be called. The icon is not activated until a user event is detected in step **86**, and if the member decides to check the information available as represented by the displayed icon, a message window will be brought up in step **88**. Step **90** is running continuously to detect whether a user selection is detected. If so, it is checked to see whether the member has viewed the package selected in step **92**. If the member so desires, a "package viewed" report is issued in step **94**, and the package is viewed in step **96**. The icon is subsequently closed in step **98**, and the process comes to a full stop in step **100**. If back in step **92**, the member does not want to view the package immediately, it would be checked to see whether the member desires to view the package later in step **102**. A timer is set in step **104** if the member indicates that he/she may come back and view the package in a predetermined time period. The message window is then closed in step **106**, and a constant detection will be made to see whether the time period set by the timer expires in step **108**. If the time expires, the user event detection process in step **86** is again activated. However, if in step **102**, the member indicates that he/she would not view the package in the near future, then an opportunity is provided to the member to decide whether the selected package should be deleted permanently in step **110**. If so, a "package deleted" report is issued in step **112** and the package is deleted permanently

from the PC in step **114**. Further from step **110**, if the member doesn't want to delete the package, he/she can go back to the display message window or take actions in step **118**.

Referring next to FIGS. **6–8**, a pop-up notification icon **122** which notifies a computer user of an incoming delivery of media forming part of an advertising campaign for which the computer user has been targeted and an associated user interface **122'** enables the computer user to control the delivered media will now be discussed in greater detail. As may now be seen, the computer user is notified of the media file by the appearance of the notification icon **122** on the computer screen **120**. The notification icon **122** should be graphically designed to immediately draw the attention of the computer user. For example, in FIG. **6**, the notification icon **122** appears as a multi-colored, highly stylized bulls eye and arrow design. Of course, it is fully contemplated that a wide array of designs may be used as the notification icon **122**. Also, to enhance the attention-getting abilities of the notification icon **122**, it is contemplated that the notification icon **122** be configured to always appear in the foreground of the computer screen **120** regardless of what other applications are running when the notification icon **122** is generated. Alternately, the notification icon **122** may be accompanied by an audio file which generates an audible sound to call the computer user's attention to the delivery of the media.

It is further contemplated that the notification icon **122** may be standardized for all advertising campaigns or customized for each advertising campaign. If standardized, the notification icon **122** may be stored with the advertising campaign application which is installed on the computer system for which a user has agreed to received targeted advertising campaigns. If customized, for example, to incorporate the corporate logo of the organization conducting the advertising campaign, the entire notification icon **122** (or, at the very least, that portion of the notification icon **122** which is customized) should be delivered with the media. Of course, to provide both options, the installed application may include a default notification icon which will be generated by the application if the delivered media does not include a substitute notification icon **122**. It is contemplated that one advantage of using customized notification icons is that the computer users forming the targeted audience may use the knowledge that they derive from the notification icon **122** to decide whether or not to view the delivered media. For example, if the notification icon conveyed to the computer user that the advertising campaign for which media had been delivered was directed to new automobiles and that particular computer user had recently purchased a new automobile, it is highly unlikely that the computer user would be interested in viewing advertisements for goods that they are not considering purchasing.

In alternate configurations thereof, the resident application may be configured such that the notification icon **122** appears when delivery of the media begins, for example, when the arrival of a first packet of media data is detected or when the delivery is complete, for example, when the arrival of a last packet of media data is detected. While it is often desirable to notify the computer user upon start of the arrival of media data, there are a number of advantages to generating the notification icon **122** upon completion of delivery. For example, on occasion, part of the media being delivered may be unusable due to added noise occurring during transmission. In such circumstances, a portion of the media data may need to be resent before the delivered media may be executed. Similarly, because the speed at which the media is delivered varies depending on how heavily the computer user is receiving and/or transmitting data over the transmission medium, delivery of the media may require much longer than normally expected. Thus, by delaying the appearance of the notification icon **122** until delivery is complete and integrity of the delivered media is checked by the resident application, any irritation caused by the resident application being unable to execute the delivered media upon receiving such a request from the computer user before the resident application is ready to process such a request is avoided. Of course, the notification icon **122** may incorporate both options. For example, the notification icon **122** may flash to indicate that delivery of the media is on-going and turn solid when ready to execute.

As disclosed herein, the notification icon **122** appears upon initiation of delivery of media, flashes while delivery of the media is on-going and provides no user interface functions such as allowing the computer user to terminate delivery of the media before delivery is complete. When delivery is complete, the notification icon **122** changes appearance, for example, changing from a flashing image to a solid image and is converted, by the resident application, to user interface **122'** shown in FIGS. **7** and **8**. The user interface **122'** is similar in appearance to the notification icon **122** but, unlike the notification icon **122**, if the computer user attempts to access the user interface **122'**, for example, using a "point and click" operation using a mouse, upon detecting the attempted access, the resident application opens dialog box **124**.

As illustrated herein, the dialog box **124** is comprised of a single text box **124** and first, second, third and fourth graphical interfaces **126**, **128**, **130** and **132**. For example, each of the graphical command interfaces **126**, **128**, **130** and **132** may be comprised of a "button", the depression of which will cause the resident application to execute a command which appears on the button in natural language readily understandable by the computer user. Of course, the dialog box **124** may include any number of text boxes and/or graphical interfaces as necessitated by the needs of the advertiser sponsoring the media campaign. In the embodiment disclosed herein, the text box **124** is filled with the corporate logo of the advertiser, and a brief remark intended to remind the computer user of the type of media delivered to the resident application and to generate interest in viewing it. For example, an automobile manufacturer rolling out a new car line targeted at consumers in their early 20's, the text box **124** may contain a message such as "Want to experience the all-new **699** by ABC Automakers?"

As further illustrated herein, the user interface **122'** further includes four graphical command interfaces, each constructed as a button. Actuating the first command interface **126** causes the first command interface **126** to issue an instruction to the resident application to execute the media package delivered to the resident application. Actuating the second command interface **128** causes the second command interface **128** to issue an instruction to the resident application to close the user interface **122'** and notification icon **122**, set a timer to a preselected time period, for example, 1 hour, and, upon expiration of the time period, to re-open the user interface **122'**. Actuating the third command interface **130** causes the third command interface to issue a command to the resident application to open an Internet browser and go to a specified web address. Finally, actuation of the fourth command interface **132** closes the user interface **122'** and the notification icon **122** without setting the timer.

It is contemplated that each of the command interfaces **126**, **128**, **130** and **132** should be relatively simple and not

configured to initiate the execution of plural commands, for example, by attaching a command sub-menu to one or more of the command interfaces **126**, **128**, **130** and/or **132**. Of course, such a alternate configuration may be readily achieved if desired. It is, however, further contemplated that at least one or more of the command interfaces **126**, **128**, **130** and/or **132** be tied to an intermediate interface, typically, to confirm an issued instruction. For example, rather than merely tying the fourth command interface **132** to an instruction to close the notification icon **122** and the user interface **122'**, the fourth command interface **132** can also be tied to a command to delete the received media without viewing. However, before the received media is deleted, it may be desirable to generate a screen issuing a warning as to the nature of the command issue and requesting a confirmation of the issued command.

A close examination of the computer screen **120** reveals that the computer system on which the notification icon **122** and user interface **122'** reside is operating on a conventional Windows **95**/**98** platform. However, it is fully contemplated that, by a relatively straightforward recoding thereof, the notification icon **122** and user interface **122'** may be configured to operate on other platforms such as the Windows NT/2000, VME or Linux platforms. As may be further seen in either of FIGS. **6** or **7**, as indicated by the other full-size icons visible on the computer screen **120**, plural other applications also reside on the computer system. A number of minimized icons located in the system tray further indicate which of these applications have been retrieved from auxiliary memory and placed in RAM while one application, here, the "Word" application currently available through Microsoft Corporation of Redmond, Washington has also been opened and then minimized.

Thus, in both FIGS. **6** and **7**, while the notification icon **122** and the user interface **122'** are generated in the foreground of the computer screen **120**, since no other applications are running when these images are generated, it may not be readily apparent that the notification icon **122** and the user interface **122'** are both configured to always open in the foreground of the c computer screen **120**, regardless of what other applications are running simultaneously therewith. However, in FIG. **8**, the Word application is running in the foreground when both the notification icon **122** (and subsequently, the user interface **122'** are launched. As may now be seen, both the notification icon **122** and the user interface **122'** are configured to launch in front of any other applications. For example, in FIG. **8**, the user interface **122'** has launched in front of the Word application **148**

Referring next to FIG. **9**, it illustrates a method of analyzing the results of an advertising campaign implemented in accordance with the method described in FIG. **4**. Starting from step **134**, an analysis process is initiated. It is checked in step **138** to see whether a recent report has been received. If so, the tables and profiles in the databases are updated in steps **138** and **140**. If the entire campaign is determined to be completed in step **142**, then at least one final report is issued in step **144** and thus conclude the process. If the campaign is still ongoing, the process routes back to step **136** to monitor any new added reports.

Although illustrative embodiments of the invention have been shown and described, other modifications, changes, and substitutions are intended in the foregoing disclosure. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the scope of the invention.

What is claimed is:

1. A computer-implemented user interface for opening a media file transmitted to a background space of a computer system via a network using a polite push data transmission technique, comprising:

a first command interface, the execution of which transfers said media file to a foreground space of said computer system and opens said media file;

a second command interface, the execution of which deletes said media file without opening said media file or transferring said media file to said foreground space;

a third command interface, the execution of which delays opening of said media file for a selected time period; and

a fourth command interface, the execution of which establishes a link with an address associated with an originator of said media file;

wherein said first, second, third and fourth command interfaces all form part of a first level icon, and further comprising:

a second level icon, the selection of which drills down to said first level icon.

2. The user interface of claim **1**, wherein selection of said fourth command interface opens a browser and commands said browser to link to said address.

3. The user interface of claim **1**, wherein said user interface further comprises a text box in which information describing said received media file is contained.

4. The user interface of claim **1**, wherein said media file is an advertisement for goods or services that are the subject of an advertising campaign.

5. The user interface of claim **1**, wherein a survey resides at said address.

6. The user interface of claim **1**, further comprising an initial icon displayed upon initiation of said arrival of said media file, said second level icon being displayed upon completion of said arrival of said media file.

7. The user interface of claim **6**, wherein said initial icon has a reduced size relative to said second level icon.

8. The user interface of claim **1**, further comprising a notification application coupled to said first and second command interfaces, said notification application transmitting a notification to a remote application upon selection of either said first command interface or said second command interface, said remote application constructing an evaluation of an advertising campaign being at least partially conducted by transmitting said media file to said computer system, said evaluation being constructed using notifications issued by said notification application in response to selection of either said first or second command interfaces.

9. The user interface of claim **8**, wherein:

selection of said first command interface causes said notification application to issue a notification of an opening of said transmitted media file; and

selection of said second command interface causes said notification application to issue a notification of a deletion of said transmitted media file prior to opening thereof.

10. The user interface of claim **8**, wherein selection of said third command interface, causes said notification application to issue a notification of a delay in opening said media file, said remote application constructing said evaluation of said advertising campaign using said notifications issued upon selection of said third command interface.

11. The user interface of claim **8**, wherein said remote application constructing said evaluation of said advertising campaign uses information received during interchanges conducted after establishment of said link with said address.

12. The user interface of claim **1**, wherein the execution of the third command interface causes said first level icon to close and then to automatically re-open at the end of said selected time period.

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